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10/732,792

12/09/2003

Roy D. Roberts

6577P001

2745

8791

7590

07/02/2007

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EXAMINER

RAABE, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

07/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/732,792

Applicant(s)

ROBERTS, ROY D.

Examiner

Christopher M. Raabe

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 11, 2007 has been entered.

2. Applicant's arguments filed May 11, 2007 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1, 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USPN 3778662), in view of Roberts et al. (USPN 4633128).

With regard to claim 1,

Johnson discloses a sub-miniature arc lamp comprising: a sapphire body having a first end and a second end (column 3, lines 7-15, and the figure), the first end being coupled to a first cap and the second end being coupled to a second cap to define a sealed envelope, a first

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electrode having a first end and a second end, the first end being mounted in the first cap; and a second electrode having a first end and a second end, the first end of the second rod being mounted in the second cap (19 of the figure).

Johnson does not disclose the first electrode to comprise a first rod, nor the second electrode to comprise a second rod.

Roberts et al. do disclose a first electrode comprising a first rod and a second electrode comprising a second rod (94,100 of fig 2) providing a simpler, more durable electrode structure.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the electrode structure of Roberts et al. into the lamp of Johnson in order to provide a simpler, more durable electrode structure.

With regard to claim 6,

Johnson discloses the sub-miniature arc lamp, further comprising an airtight housing substantially surrounding the sapphire body (11 of the figure).

With regard to claim 7,

Johnson discloses the sub-miniature arc lamp, wherein the airtight housing contains an inert gas (column 5, lines 25-40).

With regard to claim 8,

Johnson discloses the sub-miniature arc lamp, wherein the sapphire body is a sapphire tube (14 of the figure).

With regard to claim 9,

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Johnson discloses the sub-miniature arc lamp, wherein the first electrode is an anode and the second electrode is a cathode (column 2, lines 25-32).

5. Claims 2-5, 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (as above), Roberts et al. (as above) and Waymouth (USPN 3728004).

With regard to claim 2,

Johnson discloses the sub-miniature arc lamp.

Johnson does not disclose the getters, nor the first electrode comprising a first rod.

Roberts et al. disclose a first electrode comprising a first rod (100 of fig 2), providing a simpler, more durable electrode structure.

Waymouth discloses an arc lamp further comprising one or more getters, each of the one or more getters comprising a disc having a cavity defined substantially at the center of the disc and the first electrode passing through the cavity such that the getter is mounted on the first electrode between the first and second ends of the first electrode (8 of figs 2,3) allowing for the removal of undesirable gases.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the electrode structure of Roberts et al. and getters of Waymouth into the lamp of Johnson in order to provide a simpler, more durable electrode structure while allowing for the removal of undesirable gases.

With regard to claim 4,

Johnson discloses the sub-miniature arc lamp.

Johnson does not disclose getters, nor the second electrode comprising a second rod.

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Roberts et al. disclose a second electrode comprising a second rod (94 of fig 2), providing a simpler, more durable electrode structure.

Waymouth discloses an arc lamp further comprising one or more getters, each of the one or more getters comprising a disc having a cavity defined substantially at the center of the disc and the second electrode passing through the cavity such that the getter is mounted on the second electrode between the first and second ends of the second electrode (8 of figs 2,3) allowing for the removal of undesirable gases.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the electrode structure of Roberts et al. and getters of Waymouth into the lamp of Johnson in order to provide a simpler, more durable electrode structure while allowing for the removal of undesirable gases.

With regard to claim 10,

Johnson discloses a sub-miniature arc lamp comprising: a sapphire body having a first end and a second end (column 3, lines 7-15, and the figure), the first end being coupled to a first cap and the second end being coupled to a second cap to define a sealed envelope (18 of the figure), wherein the sapphire body is substantially surrounded by an airtight housing filled with an inert gas (column 5, lines 25-40, and 11 of the figure); a first electrode having a first end and a second end, the first end being mounted in the first cap, and the second end remains substantially freestanding; a second electrode having a first end and a second end, the first end of the second electrode being mounted in the second cap and the second end of the second electrode remains substantially freestanding.

Johnson does not disclose the first electrode comprising a first rod, a second electrode comprising a second rod, nor one or more getters being mounted along the first electrode.

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Roberts et al. do disclose a first electrode comprising a first rod and a second electrode comprising a second rod (94, 100 of fig 2), providing a simpler, more durable electrode structure.

Waymouth does disclose getters being mounted along a first electrode (8 of fig 1), allowing for the removal of undesirable gases.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the electrode structure of Roberts et al. and getters of Waymouth into the lamp of Johnson in order to provide a simpler, more durable electrode structure while allowing for the removal of undesirable gases.

With regard to claim 12,

Johnson discloses the sub-miniature arc lamp.

Johnson does not disclose getters.

Waymouth does disclose getters being mounted along a second electrode (8 of fig 1), allowing for the removal of undesirable gases.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the getters of Waymouth into the lamp of Johnson in order to remove undesirable gases.

With regard to claims 3,5,11,13,

Johnson discloses the sub-miniature arc lamp.

Neither Johnson nor Roberts disclose getters.

Waymouth does disclose one or more getters including one or more mercury dispensing getters (column 2, lines 60-65), allowing for the removal of undesirable gases.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the getters of Waymouth into the lamp of Johnson in order to remove undesirable gases.

With regard to claim 14,

Johnson discloses the sub-miniature arc lamp, wherein the sapphire body is a sapphire tube.

### ***Response to Arguments***

While the applicant argues that the combination of the electrode structure of Roberts et al. with the lamp of Johnson renders the lamp of Johnson unsatisfactory for its intended purpose (providing a high-intensity fluorescent lamp) by lowering intensity relative to a given potential, the examiner asserts that a rod structure, while lowering intensity relative to a given potential, is not prohibitive with respect to providing high-intensity discharge (the intended purpose of Johnson). Issues of cost do not mean that a person of ordinary skill in the art would not make the combination because of some technological incompatibility (MPEP 2145 – VII) Therefore the combination of references does not render the resulting lamp unsatisfactory for the intended purpose of the Johnson reference, and hence the rejections are maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Raabe whose telephone number is 571-272-8434. The examiner can normally be reached on m-f 7am-3:30pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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PRIMARY EXAMINER  
ARTUNIT 2879